



CONTINGENCY PLAN

SKINNER LANDFILL SITE BUTLER COUNTY WEST CHESTER, OHIO

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LIST OF ACRONYMS

AMP	Air Monitoring Plan
AOC	Administrative Order on Consent
ARARs	Applicable or Relevant and Appropriate Requirements
BOD	Biochemical Oxygen Demand
CLP	Contract Laboratory Program
COD	Chemical Oxygen Demand
Conrail	Consolidated Railroad Corporation
CP	Contingency Plan
CQAP	Construction Quality Assurance Plan
DNAPLs	Dense Non-Aqueous Phase Liquids
FS	Feasibility Study
FSP	Field Sampling Plan
GWDI	Groundwater Design Investigation
HASP	Health and Safety Plan
HCl	Hydrochloric Acid
HDPE	High Density Polyethylene
ID	Inner Diameter
LTPP	Long Term Performance Plan
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MSL	Mean Sea Level
OEPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety & Health Administration
PCBs	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
PRP	Potentially Responsible Party
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RA	Remedial Action
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
su	Standard Units
SOP	Standard Operating Procedure
SOW	Statement of Work
SPCC	Spill Prevention Control and Countermeasure Plan
SVE	Soil Vapor Extraction
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

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1.0 INTRODUCTION

Presented herein are plans for emergency occurrences that may arise on-site during remedial activities. This plan addresses responsibilities of plan implementation, emergency service contacts, and protocols for implementation of the plan. Types of emergencies addressed include fire or explosion, serious personal injury, chemical exposure, release of hazardous materials, and unsafe working conditions. This plan also references other applicable plans that may be implemented for emergency occurrences including the Spill Prevention Control and Countermeasures Plan (SPCC), the Air Monitoring Plan (AMP), and the site-specific Master Health and Safety Plan (HASP) (Construction Phase). These plans are presented as separate documents.

2.0 SITE LOCATION AND DESCRIPTION

The Skinner Landfill is located approximately 15 miles north of Cincinnati, Ohio, near West Chester, Butler County, Ohio in Township 3, Section 22, Range 2. The site is located along Cincinnati-Dayton Road. The site is bordered on the south by the East Fork of Mill Creek, on the north by wooded land, on the east by a Consolidated Railroad Corporation (Conrail) railroad right-of-way, and on the west by Skinner Creek.

The site is located in a highly dissected area that slopes from a till-mantled bedrock upland to a broad, flat-bottomed valley that is occupied by the main branch of Mill Creek. Elevations on the site range from a high of nearly 800 feet above mean sea level (MSL) in the northeast, to a low of 645 feet MSL near the confluence of Skinner Creek and the East Fork of Mill Creek. Both Skinner Creek and the East Fork of Mill Creek are small, shallow streams. Both of these streams flow to the southwest from the site toward the main branch of Mill Creek. A third on-site stream, Dump Creek, borders the landfill on the east. Dump Creek is intermittent and flows south into the East Fork of Mill Creek. Three shallow ponds are also located on the site.

In general, the site is underlain by relatively thin glacial drift over interbedded shales and limestones of Ordovician age. The composition of the glacial drift ranges from intermixed silt, sand and gravel, to silty, sandy clays, and its thickness ranges from 0 to over 40 feet on the site. The sand and gravel deposits comprise the hills and ridges and are encountered near the surface of the central portion of the site. The silts and clays usually occur as lenses in the sands and gravel or directly overlie bedrock.

2.1 Site History and Background

The property was originally developed as a sand and gravel mining operation, and was subsequently used as a landfill from 1934 to 1990. According to USEPA studies, materials deposited at the site include demolition debris, household refuse, and a wide variety of chemical wastes. The waste disposal areas include a now-buried waste lagoon near the center of the site and a landfill. According to USEPA studies, the buried waste lagoon was used for the disposal of paint wastes, ink wastes, creosote, pesticides, and other chemical wastes. The landfill area, located north and northeast of the buried lagoon, received predominantly demolition and landscaping debris.

In 1976, the Ohio EPA (OEPA) initiated an investigation of the site in response to reports of a black oily liquid that was observed during a fire call to the site. Before the OEPA could complete the investigation, the landfill owners, the Skinners, covered the lagoon with a layer of demolition debris. Mr. Skinner further dissuaded the OEPA from accessing the site by claiming that nerve gas, mustard gas, and explosives were buried in the landfill. The OEPA requested the assistance of the U.S. Army after obtaining this information.

Mr. Skinner later retracted his statements concerning buried ordnance, and a U.S. Army records review performed in 1992 did not reveal any evidence of munitions disposal at the site.

In 1982, the site was placed on the National Priority List by the USEPA based on information obtained during a limited investigation of the site. The investigation indicated groundwater contamination had occurred as a result of the buried wastes. In 1986, a Phase I Remedial Investigation was conducted that included sampling of groundwater, surface water, and soil, as well as a biological survey of the East Fork of Mill Creek and Skinner Creek. A Phase II Remedial Investigation was conducted from 1989 to 1991 and involved further investigation of groundwater, surface water, soils, and sediments. A Baseline Risk Assessment and Feasibility Study (FS) were completed in 1992.

The Phase II Remedial Investigation revealed that the most contaminated media at the site is the soil from the buried waste lagoon. Lower levels of contamination were also found in soils on other portions of the site and in the groundwater, and very low levels were found in the sediments of the Mill Creek, Skinner Creek, the Duck Pond, and the Diving Pond. Migration of the landfill constituents has been limited, and the Phase II Remedial Investigation concluded that there had been no off-site migration of landfill constituents via groundwater flow.

3.0 RESPONSIBILITIES

The Field Supervisor will serve as the Emergency Coordinator. Any emergency occurrences will be reported to the Emergency Coordinator who will, in turn, communicate to the Construction Project Manager and Implementor's Project Manager. The Emergency Coordinator will make contacts with agencies requiring notification of the particular occurrence. The exception to this will be any contacts required for immediate threats to health, human safety, or property such as fire or emergency medical contacts; these contacts will be made immediately by the SSO or other site personnel.

4.0 COMMUNITY INVOLVEMENT AND EMERGENCY SERVICE CONTACTS

Provided below is a description of how information will be provided to the community, a list of emergency service contacts, and site emergency preparations.

4.1 Community Involvement

Prior to the initiation of site activities, key community personnel and public safety departments will be notified of the activities that will occur and will be informed of the need for emergency assistance and the potential emergency contingencies. The community contacts who will be informed of site activities will include (but will not be limited to): West Chester Administrative Assistant and the West Chester Trustees, West Chester Police Department, West Chester Fire Department, the Butler County Emergency Management Agency, Union Elementary School, and the Mercy Hospital Fairfield. These entities will be provided with copies of the Health and Safety Plan and Contingency Plan. West Chester will be provided the schedule for the work to be performed during this implementation of the remedy. Work will be performed at the site every scheduled working day per the approved schedule. West Chester should notify every group that will utilize the Union Elementary School building of the on-going activities at the Skinner site.

Two to three weeks prior to the initiation of intrusive site activities, Contractors and/or the representative(s) of the implementors will meet with the West Chester Coalition on the Skinner Landfill Site to review this plan. This will be followed by a meeting with the public safety departments, as applicable.

4.2 Emergency Service Contacts

The Emergency Coordinator will verify appropriate emergency service contacts within the community and communicate with these contacts before beginning work on-site. The Emergency Coordinator will inform the emergency service contacts about the nature and duration of work expected on the site and the type of contaminants and possible health or safety effects of emergencies involving these contaminants. Also at this time, the Emergency Coordinator and the emergency response contacts will make arrangements to handle any emergencies that might be anticipated.

EMERGENCY PHONE NUMBERS:

Police Department	<u>911 [(513) 777-2231 (Union Twsp. Non-Emergency)]</u>
Fire Department	<u>911 [(513) 777-1133 (Union Twsp. Non-Emergency)]</u>
Hospital	<u>(513) 870-7000 (Mercy Hospital Fairfield)</u>
Hospital Address	<u>3000 Mack Road, Fairfield, Ohio</u>
National Response Center	<u>(800) 424-8802</u>
Implementor's Project Manager	<u>Ben Baker, SLG, (517) 636-0787</u>
Site Safety Officer (SSO)	<u>Brent Edwards, Earth Tech, (859) 442-2300</u>
Emergency Coordinator	<u>Tim Meade, Earth Tech, (859) 442-2300</u>
Prime Contractor Health & Safety Representative(s)	<u>Jeff Grant, Earth Tech, (800) 688-9828</u>
Construction Project Manager	<u>Rick Warwick, Earth Tech, (859) 442-2300</u>
USEPA Representative	<u>Scott Hansen, (312) 886-1999</u>
OEPA Representative	<u>Chuck Mellon, (937) 285-6056</u>
OEPA – Emergency Spills	<u>(800) 282-9378</u>
National Response Center Releases	<u>(800) 424-8802</u>
Butler County Emergency Management Agency	<u>(513) 887-3472</u>
West Chester Police	<u>Lieutenant Herzog, (513) 777-2231</u>

West Chester
Coalition on Skinner
Cleanup (513) 779-4424

Union Elementary School (513) 777-2201

Butler County
Planning Commission (513) 887-3413

HOSPITAL ROUTE:

From the site, turn right (north) on Cincinnati-Dayton Road to the I-75 intersection and take I-75 South. Proceed on I-75 to I-275 West. Take I-275 West to the Winton Road Exit (at Forest Fair Mall) and take the north exit. Travel north on Gilmore Road (Winton Road south of the freeway) to Mack Road. Turn right (east) on Mack Road and the Mercy Hospital Fairfield will be on the left (north) side of the road at 3000 Mack Road. A map to the hospital is provided in the HASP. Approximate travel time is estimated to be 15 to 20 minutes from the site to the hospital.

4.3 Emergency Preparations

Once the Support Zone is established, and before the field activity startup, the Emergency Coordinator will drive the route to the hospital, post directions and/or a map to the hospital, set up the first aid station, position 10-pound Type A/B/C fire extinguishers and other emergency equipment such as PPE, portable radios, flashlights and eyewash units.

5.0 IMPLEMENTATION

The Emergency Coordinator will implement the emergency action procedures whenever conditions at the site warrant such action. The Emergency Coordinator will be responsible for coordinating the evacuation, emergency treatment, and emergency transport of site personnel as necessary, and for notification of emergency response units and the appropriate management staff. The following conditions may require implementation of emergency action procedures:

- Fire or explosion on-site.
- Serious personal injury and/or chemical exposure.
- Release of hazardous materials, including gases or vapors at levels greater than the maximum use concentrations of respirators.
- Unsafe working conditions, such as inclement weather, or tornado.

6.0 FIRE OR EXPLOSION

If a fire or explosion has taken place, emergency steps will include: 1) evacuation of work area and venting, and 2) notification of the fire department and of other appropriate emergency response groups, as necessary. If a small fire occurs and the Emergency Coordinator deems that it is appropriate to attempt to fight the fire, a portable fire extinguisher will be used. The person attempting to extinguish the fire should start at least 8 feet upwind of the fire, aim the extinguisher at the base of the fire, and sweep the extinguisher from side to side while slowly approaching the fire. Portable fire extinguishers will be maintained for each work zone.

7.0 FIRST-AID AND MEDICAL PROCEDURES

7.1 Physical Injury

Emergency first aid will be administered on-site as appropriate. Then, the individual will be decontaminated (if possible, depending on the severity of the injury) and transported to the Mercy Hospital Fairfield, if needed.

7.2 Chemical Exposure

Typical response procedures for the anticipated contaminants of concern on the site include:

SKIN CONTACT: Use copious amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention. Eye wash will be provided on-site at the CRZ and/or support zone as appropriate. Eyes should be rinsed for 15 minutes upon chemical contamination.

INHALATION: Move to fresh air and/or, if necessary, decontaminate/transport to hospital.

INGESTION: Decontaminate and transport to emergency at the Mercy Hospital Fairfield.

**PUNCTURE
WOUND OR
LACERATION:** Decontaminate and transport to emergency at the Mercy Hospital Fairfield. The SSO will provide medical data sheets and a copy of the HASP with MSDSs to medical personnel as requested.

8.0 HAZARDOUS MATERIALS OR VAPOR RELEASE

In the event that there is a release of hazardous material or vapor in the work area above the limitations of the PPE in use, site personnel will move upwind until concentrations fall to a safe level. Air monitoring will be continued for assessing increase/decrease of levels and wind direction of the release. If the air monitoring results exceed the action levels established at or near the site boundary (fenced area), then appropriate notifications will be made and the Air Monitoring Plan will be followed concerning elevated levels provided as Support Plan E of the Remedial Design.

9.0 ADVERSE WEATHER CONDITIONS

In the event of adverse weather conditions, the SSO will determine if work can continue without endangering the health and safety of field workers. Some items to be considered before determining if work should continue are:

- Potential for heat stress and heat related-injuries.
- Potential for cold stress and cold-related injuries.
- Treacherous weather-related working conditions.
- Limited visibility.
- Potential for electrical storms.

9.1 Heat Stress

The SSO will continuously monitor personnel visually for signs of heat stress. In addition, field personnel will be instructed to observe for symptoms of heat stress and methods on how to control it. One or more of the following control measures can be used to help control heat stress:

- Provision of adequate liquids to replace lost body fluids. Employees must replace water and salt lost from sweating. Employees must be encouraged to drink more than the amount required to satisfy thirst. Thirst satisfaction is not an accurate indicator of adequate salt and fluid replacement;
- Replacement fluids can be commercial mixes such as Gatorade. (Recommend mixing twice as much water as commercial mix suggests);
- Establishment of a work regime that will provide adequate rest periods for cooling down. This may require additional shifts of worker;
- Cooling devices such as vortex tubes or cooling vests can be worn beneath protective garments;
- All breaks are to be taken in a cool rest area;
- Employees will remove impermeable protective garments during rest periods;
- Employees will not be assigned other tasks during rest periods;
- Employees will be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress; and
- Employees should not consume alcoholic or diuretic (e.g. coffee, tea) beverages during the work shift or breaks.

In extremely hot or humid conditions work/rest cycles to control heat stress on-site will be defined by Wet Bulb Globe Temperature Index (WBGT) technique. Adjustments to the work/rest cycles may be required when workers are wearing protective coveralls (i.e., tyvek). This method requires the use of a black globe thermometer, a natural wet-bulb and a dry bulb. The method is described in detail in "Threshold Limit Values for Chemical Substances and Physical Agents" published by the American Conference of Governmental Industrial Hygienists (ACGIH).

9.2 Cold Exposure

If the field activities occur during a period when temperatures average below freezing, the following guidelines will be followed.

Persons working outdoors in temperatures at or below freezing may be subject to frostbite. Extreme cold for a short time may cause severe injury to the surface of the body, or result in profound generalized cooling of the body core, resulting in coma and death. Areas of the body which have high surface area-to-volume ratio such as fingers, toes, ears, are the most susceptible.

Two factors influence the development of a cold injury; ambient temperature and the velocity of the wind. Wind chill is used to describe the chilling effect of moving air in combination with low temperature. For

instance, 10° F with a wind of 15 miles per hour (mph) is equivalent in chilling effect to still air at - 18° F.

As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. Additionally, water conducts heat 240 times faster than air. Thus, the body cools suddenly when chemical-protective equipment is removed if the clothing underneath is perspiration-soaked.

Local injury resulting from cold is included in the generic term frostbite. There are several degrees of damage. Frostbite of the extremities can be categorized into:

- Frost nip or incipient frostbite: Characterized by suddenly blanching or whitening of skin.
- Superficial frostbite: Skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- Deep frostbite: Tissues are cold, pale, and solid: extremely serious injury.

Prevention of frostbite is vital. Keep the extremities warm. Wear insulated clothing as part of one's protective gear during extremely cold conditions. Check for symptoms of frostbite at every break. The onset is painless and gradual--you may never know you have been injured until it is too late.

To administer first aid for frostbite, bring the victim indoors and rewarm the areas quickly in water between 39°C and 41°C (102°F to 105°F). Give a warm drink--not coffee, tea, or alcohol. The victim should not smoke. Keep the frozen parts in warm water or covered with warm clothes for 30 minutes, even though the tissues will be very painful as it thaws. Then elevate the injured area and protect it from injury. Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured areas. Keep victim warm and get immediate medical care.

After thawing, the victim should try to move the injured areas a little, but no more than can be done alone (without help).

- Do not rub the frostbitten part (this may cause gangrene).
- Do not use ice, snow, gasoline, or anything cold on frostbite.
- Do not use heat lamps or hot water bottles to rewarm the part.
- Do not place the body part near a hot stove.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperature. Its symptoms are usually exhibited in five stages: 1) shivering; 2) apathy, listlessness, sleepiness, and (sometimes) rapid cooling of the body to less than 95°F; 3) unconsciousness, glassy stare, slow pulse, and slow respiratory rate; 4) freezing of the extremities; and, finally, 5) death.

Effects arising from cold exposure will be minimized by providing workers with insulated clothing when the equivalent chill temperature as presented in the ACGIH booklet is less than 30°F. Furthermore, field activities will generally be curtailed or halted if the equivalent chill temperature is below -20°. The ultimate responsibility for delaying work at a site due to inclement weather rests with the SSO.

9.3 Other Severe Weather

If threatening weather approaches, the SSO will be prepared to halt field activities. Rain, lightning and threat of tornado or flood are threatening conditions that should be considered. Heavy equipment operations and

drilling typically do not occur when rain or lightning begins. Some field operations may continue during light rain at the SSO's discretion. If threatening weather is likely, the SSO should monitor a radio for weather information updates.

10.0 OTHER SAFETY ISSUES

10.1 Access

If access to the Site or any portion of the Site is blocked by a person or objects, or if a person threatens personal or property injury to prevent access, the SSO shall immediately stop attempted ingress and contact the U.S. EPA Remedial Project Manager. No access shall be attempted until the matter is resolved.

10.2 Poison Ivy

If someone should come in contact with poison ivy, the individual should immediately wash the affected area with the Ivy Cleaner provided in the first aid kit. If a rash develops, it should be treated at a medical facility as soon as possible.

10.3 Snake Bite Prevention and First Aid

Precautions against the possible presence of snakes should be taken when walking through overgrown vegetation and when moving debris (i.e., lumber, scrap metals, etc.). If someone is bitten by a snake, and the snake bite occurs in a location that is within a 1-hour drive of a medical facility, such as at the Skinner site, a conservative approach is safest. Keeping the victim quiet, lying or sitting and reassuring him/her is all that is required. He/she should be transported safely (no speeding) to Mercy Hospital Fairfield. For the reassurance of both the victim and the first aider, a snakebite is not nearly as dangerous as popular mythology would suggest. In North America, death from snakebite to healthy adults is very rare. Many bites, even from known poisonous snakes, do not result in a significant amount of venom being injected.

Even when significant envenomation occurs, symptoms develop slowly over many hours and can be controlled with appropriate treatment. Field treatments advised against include ice, cutting and suction around the wound, and tourniquets. Studies indicate that ice leads to increased tissue destruction. Cutting and sucking out the wound can be shown to offer some help if it is done with the correct technique and equipment and if the victim has received a large dose of venom. In light of the damage that can be done, the risk of such a procedure is too high. It is best to transport the person immediately to a medical facility.

10.4 Tick Prevention and First Aid

Routinely check for ticks after being outdoors. Remove ticks as soon as possible before they embed. To minimize exposure, wear light-colored clothing so ticks can be detected. Tuck pants into boots or socks and wear long-sleeved shirts. Apply tick/insect repellent to clothing, unless this may interfere with the integrity of samples collected for laboratory analysis.

When a tick is found embedded, remove it by grasping it with a tweezers as close to the skin as possible and gently pull it straight out. Do not twist or jerk the tick because the head may remain embedded. Once the tick is removed, wash the area and your hands with soap and water and apply an antiseptic. Save the tick in a jar labeled with the date and the place where the tick was acquired. A physician may find this information useful and the tick specimen helpful in diagnosis if an infection results.

11.0 COMMUNITY EXPOSURE AIR MONITORING

In addition to the on-site air monitoring that will be conducted during field activities for health and safety of site workers and for field screening, air monitoring will also be conducted for community exposure. Based on previous sampling data and monitoring, it is not anticipated that concentrations of site contaminants above background will occur. The activities that will occur as part of the air monitoring program are described in more detail in the Air Monitoring Program (AMP) of the Remedial Design.

If air monitoring indicates that volatile organics or explosive gases are present above background at the site perimeter, monitoring will be conducted and evaluated continually by site personnel during site activities.

If VOCs exceed 1 ppm above background, LEL readings exceed 10 percent, particulates exceed $150\mu\text{g}/\text{m}^3$, field activities will be halted until the source of these emissions can be controlled. The action level for VOCs will be raised to 5 ppm if no benzene or vinyl chloride is detected using detector tubes. Detector tubes have detection limits of 1 ppm benzene and 1 ppm vinyl chloride. In addition, air monitoring will also be conducted for carbon monoxide and hydrogen sulfide. If it is determined that the source of the elevated emissions cannot be controlled, the following community entities will be notified: Union Elementary School, West Chester Administrative Assistant, the Butler County Emergency Management Agency, the West Chester Police Department, and the West Chester Fire Department.

If site conditions indicates that dust is being generated on-site from field activities that may potentially reach the perimeter, dust suppression methods will be utilized. The soil will be sprayed with enough water to reduce the dust, but not enough to produce surface runoff. If dust generation cannot be controlled in this manner, field activities will be halted until a successful method of dust control can be employed. Additional dust suppression methods are described in the AMP.

12.0 SPILLS AND RELEASES

In the event of a spill or release, the SPCC Plan will be implemented. In addition to outlining general spill procedures, this plan addresses notification procedures and spill prevention measures.